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The period variation of an eclipsing binary system BQ Ari.

In this study, we focus on the period variation of the eclipsing binary star BQ Ari. The observation data was obtained from the Thai Robotic Telescope at Spring Brook Observatory (TRT-SBO) from 2019 to 2020 and the Regional Observatory for Public, Chachoengsao (ROP-CCO) in 2021. The data are combined with the data from the Transiting Exoplanet Survey Satellite (TESS) in Sector 42 and 43. In order to study the period variations of BQ Ari, the times of minima were extracted from the light curves. From the result, 5, 4, 3 and 299 new times of minima were obtained from the data of TRT-SBO (2019), TRT-SBO (2020), ROP-CCO and TESS, respectively. The O-C diagram of BQ Ari shows that the system has a periodic variation with the period of 6-8 years, which might be caused by the Applegate mechanism or the M dwarf orbit around system.

Authors: Ms DEESUAN, Ladda (National Astronomical Research Institute of Thailand (Public Organization), 260 Moo 4, Donkaew, Mae Rim, Chiang Mai, 50180, Thailand); Ms SAPPANKUM, Pranita (National Astronomical Research Institute of Thailand (Public Organization), 260 Moo 4, Donkaew, Mae Rim, Chiang Mai, 50180, Thailand); Mr RATTANAMALA, Ronnakrit (Faculty of Science and Technology, Nakhon Ratchasima Rajabhat University, Nakhon Ratchasima 30000, Thailand); KOMONJINDA, Siramas (Chiang Mai University); Dr AWIPHAN, Supachai (NARIT, Thailand); Mr WUTSANG, Suwanit (National Astronomical Research Institute of Thailand (Public Organization), 260 Moo 4, Donkaew, Mae Rim, Chiang Mai, 50180, Thailand)

Presenter: Mr RATTANAMALA, Ronnakrit (Faculty of Science and Technology, Nakhon Ratchasima Rajabhat University, Nakhon Ratchasima 30000, Thailand)

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